

The efficacy of sclerotherapy and side effects were assessed. On days 14 and 28, clinical and duplex ultrasound assessments were performed by independent experts; the patients also completed a quality of life questionnaire and reported satisfaction scores. The study found no difference between compression and control groups in comparing treatment efficacy, side effects, satisfaction scores, symptoms, and quality of life scores. The authors recommended further studies to establish the role of compression in sclerotherapy and to evaluate other compression strategies.

Thomasset et al⁴⁹ designed a prospectively collective database of ultrasound-guided foam sclerotherapy. They evaluated 126 patients who had undergone targeted ultrasound-guided foam sclerotherapy of the GSV (n = 75), the small saphenous vein (n = 13), and the anterior accessory saphenous vein (n = 9). They had a mean follow-up of 3 months and used duplex ultrasound scans for evaluation of complete occlusion of the target vessel. The only factor associated with vessel outcome was compliance of postprocedure compression therapy. The only factor associated with complications after foam sclerotherapy was female sex. Their data suggested that compliance with postprocedure compression therapy and sex were important factors in successful outcome. Patients were treated with foam pads that were applied over the treated vein, and then class II thigh-length graduated compression stockings with a waist extension were applied over the foam pads after the procedure. Foam pads were worn for 1 week, and stockings were then worn for a total of 6 weeks.

It is appropriate to assume that compression after sclerotherapy maximizes venous wall apposition and contact with the intraluminal sclerosant, thereby allowing more effective panendothelial destruction and endosclerosis. Existing data suggest that compression after sclerotherapy improves the clinical disappearance of superficial veins and reduces pigmentation and bruising. The preponderance of evidence suggests that compression should be considered an integral part of management after sclerotherapy. However, despite several consensus statements, no conclusion can be reached on the basis of current data as to the best method, dose, or duration of compression that achieves optimal results after sclerotherapy.^{19,50-52} A key component in all of the studies analyzing compression treatment for venous disease is the issue of compliance, and in most studies this outcome is not reported. Well-designed RCTs are needed to provide definitive information.

The impact of compression on the efficacy of foam sclerotherapy remains to be determined as this is only one of the confounding variables affecting outcomes. The evidence for compression recommendations is

incomplete, but the standard of care and current medical practice of those treating varicose veins are to recommend and to perform some form of compression.

4. COMPRESSION AFTER TREATMENT OF SUPERFICIAL VEINS IN PATIENTS WITH VENOUS LEG ULCERS

Guideline 4.1: Compression after superficial vein treatment in patients with a venous leg ulcer

In a patient with a venous leg ulcer, we recommend compression therapy over no compression therapy to increase venous leg ulcer healing rate and to decrease the risk of ulcer recurrence. [GRADE - 1; LEVEL OF EVIDENCE - B]

Guideline 4.2: Compression after superficial vein treatment in patients with a mixed arterial and venous leg ulcer

In a patient with a venous leg ulcer and underlying arterial disease, we suggest limiting the use of compression to patients with ankle-brachial index exceeding 0.5 or if absolute ankle pressure is >60 mm Hg. [GRADE - 2; LEVEL OF EVIDENCE - C]

A total of seven relevant publications were identified,⁵⁷⁻⁶³ of which one was a systematic review,⁵⁸ one was a guideline published by the AVF and the SVS,⁵⁷ and five were nonrandomized observational studies.⁵⁹⁻⁶³ The AVF/SVS guidelines were published in 2014 and used the same methodology as the current report. We were not able to identify any additional studies that were published subsequent to that report and that have sufficient information to consider modification of the AVF/SVS guidelines.

The management of patients with venous ulcers is often complex and time-consuming and uses a variety of modalities including surgical procedures. A great deal of time, effort, and expense goes into the healing of these lesions. A variety of etiologic factors are associated with the development of these ulcers, and several such factors persist after treatment is completed. Attention must be directed toward the modification of these factors when possible, and neutralizing the increased venous leg pressure is a common goal in these patients.

Appropriate compression therapy using short-stretch bandages, multilayer bandages, Unna boots, and various forms of pneumatic compression is the keystone to correcting elevated venous leg pressure in patients with leg ulcers. Once ulcer healing has been achieved, it becomes less feasible to continue these types of compression modalities during patients' everyday lives. As a result, elastic stockings are prescribed for these patients once the ulcers have healed regardless of the underlying pathophysiologic process that initially led to the development of the ulcer.

Two important aspects that may determine the success of preventing ulcer recurrence using compression must